ASST. PROF. AZAD RASUL

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SUMMARY

Experienced Assistant Professor of Remote Sensing and GIS with over 16 years of experience teaching and conducting research in the field. Developed four remote sensing indices. Expertise in handling data, coding, and writing technical reports. Strong analytical and problem-solving abilities, with a track record of producing high-impact research publications. Skilled in revamping syllabus and increasing student engagement. Seeking opportunities to continue making a positive impact in the field of remote sensing and GIS or climate.

PROFESSIONAL EXPERIENCE

Soran University, Soran, Erbil, Iraq

Assistant Professor of Remote Sensing and GIS, Mar 2010 – Present

- Revamped the lectures and syllabus in the department, resulting in increased student engagement and improved learning outcomes.
- Taught postgraduate and undergraduate courses in Applied Programming in Remote Sensing, Remote Sensing, Climate, and Applied Climatology.
- Supervised ongoing PhD projects (2 monitoring and harvesting water), completed PhD (2 agriculture and drought monitoring) and completed Master projects (3 about precipitation, temperature and water).
- Developed the Soil Moisture and Evapotranspiration Revealed Drought Index.

E-learning Instructor Udemy Freelance | 2020 Dec-Present

- Python for Scientific Research: From Beginner to Advanced.
- How To Use R Programming for Research.
- My courses have been a hit with over 22,000 students from 166 countries enrolled in my programs.

University of Leicester and Copernicus Global Land Service

Project Assistant (part-time), Nov 2016 - Mar 2020

- Assessed the quality of a global burned area product.
- Handled data, coded in Google Earth Engine, and wrote technical reports

University of Leicester

PhD Student Researcher, Sep 2013 - Dec 2016

- Developed three remote sensing indices (Dry Built-up Index, Dry Bare-soil Index, Normalized Ratio Scale)
- Published four papers from thesis in high-impact journals.

EDUCATION

University of Leicester

Leicester, UK

Doctor of Philosophy (Ph.D.) Remote Sensing and Geography (Sep 2016)

- **Relevant Coursework:** Remote Sensing, GIS, R programming

Luhansk Taras Shevchenko National University

Luhansk, Ukraine

Master Geography - Climate (Jun 2009)

- **Relevant Coursework:** Using computer technology in scientific and educational activities, Thematic cartography and computer map manufacture, Natural resources use and preservation.

Salahaddin University

Erbil, Iraq

Bachelor of Arts (B.A.) Geography (Jul 2000)

- **Relevant Coursework:** Geographical statistics, Cartography, Remote sensing, Agricultural geography

HONORS AND AWARDS

- **HCDP PhD Scholarship**

Full scholarship awarded by the Ministry of Higher Education and Scientific Research - KRG - Iraq in October 2012.

- **Acknowledgment and appreciation**

Recognized by the President of Soran University for outstanding academic performance in 2020, 2021, 2022, and 2023.

SKILLS

- Languages: English, Arabic, Russian and Kurdish.
- Advanced skills using Google Earth Engine, ENVI, QGIS, GeoServer, ArcGIS, Python, and R.
- Strong analytical skills and problem-solving abilities in the field of work
- Excellent skills in producing well-structured technical documents and operational procedures
- Demonstrated analytical and creative problem-solving skills
- Excellent analytical skills and cross-functional thinking
- Process validation: Performing validation for automated production process and being proactive in suggesting better, more efficient alternate solutions
- Personal Website: SmartRS Blog

LICENCES AND CERTIFICATIONS

- Effective Time Management for Professionals, Udemy, 2022 Dec.
- Postgraduate Diploma: Project Management, The Retail Banking School, 2022, Dec.
- Data Analysis with Python, freeCodeCamp, 2023 Feb.
- Scientific Computing with Python, freeCodeCamp, 2023 Jan.
- Learn to Code in Python 3: Programming beginner to advanced, Udemy, 2022 Apr.
- Remote Sensing of Coastal Ecosystems, NASA's Applied Remote Sensing Training Program, October 2020.
- Understanding Phenology with Remote Sensing, NASA's ARSET, August 2020.
- Using Earth Observations to Monitor Water Budgets for River Basin Management, NASA ARSET, August 2020.
- 2nd ESA Advanced Training Course on Atmospheric Remote Sensing, European Space Agency, October 2014

- Forest Mapping and Monitoring with SAR Data, NASA's ARSET, May 2020

CONFERENCES

- RSPSoc 2020 Virtual Conference 'Measure the World', September 2020.
- Climatological, Meteorological and Environmental factors in the COVID-19 Pandemic, Virtual Symposium organized by World Meteorological Organization, August 2020.
- The first conference on current state of research and applications of GIS and remote sensing, Soran University, Iraq, October 2019
- RSPSoc Annual Conference, Nottingham, UK, September 2016
- 9th International Conference on Urban Climate, Toulouse, France, July 2015

PROFESSIONAL MEMBERSHIPS

- GBD Collaborator at Institute for Health Metrics and Evaluation - University of Washington
- International Society for Photogrammetry and Remote Sensing
- American Society of Photogrammetry and Remote Sensing

PUBLICATIONS

I am proud to have published over 50 research articles in prestigious journals such as Lancet (**202.7 I.F.**), Lancet Public Health (**72.4 I.F.**), Lancet Infectious Diseases (**71.4 I.F.**), Urban Climate (**6.663 I.F.**), and Environment, Development and Sustainability (**4.08 I.F.**). These publications demonstrate my ability to conduct high-quality research and make meaningful contributions to my field.

1. GBD 2019 North Africa and the Middle East Air Pollution Collaborators, **Rasul**, 2023, "Effect of air pollution on disease burden, mortality, and life expectancy in North Africa and the Middle East: a systematic analysis for the Global Burden of Disease Study 2019", Lancet Planetary Health. https://doi.org/10.1016/S2542-5196(23)00053-0
2. Ibrahim, **Rasul**, Abdullah, 2023, "Improving Crop Classification Accuracy with Integrated Sentinel-1 and Sentinel-2 Data: a Case Study of Barley and Wheat", Journal of Geovisualization and Spatial Analysis. https://doi.org/10.1007/s41651-023-00152-2
3. Ibrahim, **Rasul**, Abdullah, 2023, "Sentinel-2 accurately estimated wheat yield in a semi-arid region compared with Landsat 8", International Journal of Remote Sensing. https://doi.org/10.1080/01431161.2023.2232542
4. Omer, **Rasul**, 2023, "Assessing hydrological modeling approaches: a review of the soil conservation service curve number and the soil and water assessment tool", Advanced GIS.
5. GBD 2019 Antimicrobial Resistance Collaborators, **Rasul,** 2022, **"**Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019", Lancet. https://doi.org/10.1016/S0140-6736(22)02185-7
6. GBD 2019 LRI Collaborators, **Rasul,** 2022, **"**Age–sex differences in the global burden of lower respiratory infections and risk factors, 1990–2019: results from the Global Burden of Disease Study 2019", Lancet Infectious Diseases. https://doi.org/10.1016/S1473-3099(22)00510-2
7. Peden; **Rasul**; GBD 2019 Adolescent Transport and Unintentional Injuries Collaborators, 2022, "Adolescent transport and unintentional injuries: a systematic analysis using the Global Burden of Disease Study 2019", Lancet Public Health. https://doi.org/10.1016/S2468-2667(22)00134-7
8. Hamarash; Hamad; **Rasul**, 2022, "Meteorological drought in semi-arid regions: A case study of Iran", Journal of Arid Land. https://doi.org/10.1007/s40333-022-0106-9
9. Rasul; Ibrahim, 2022, "Spatial interaction between weather and socio-demographic factor as influencing variables for COVID-19 spread in Iraq", Spatial Information Research. https://doi.org/10.1007/s41324-022-00497-8
10. **Rasul**; Balzter, 2022, "The Role of Climate in the Spread of COVID-19 in Different Latitudes across the World", COVID. https://doi.org/10.3390/covid2090085
11. Hamadamin, Omer, Rasul, 2022, "Experimental Study of Ambient Air Quality Assessment During Oil Well Drilling", Aerosol Science and Engineering. https://doi.org/10.1007/s41810-022-00145-6
12. Ningthoujam; Prestes; Andrade; Carniello; Coetsee; Harrison; Kusin; **Rasul**; Hoscilo; Oliveras; Feldpausch; Page; Bloomfield; Harrison; Prentice, 2022, "Remote sensing of tropical vegetation properties in response to fire return time", EGU22-6549. https://doi.org/10.5194/egusphere-egu22-6549

13. Al-Hajj; ... GBD 2019 Collaborators, 2022, “Injury burden in individuals aged 50 years or older in the Eastern Mediterranean region, 1990–2019: a systematic analysis from the Global Burden of Disease Study 2019”, The Lancet Healthy Longevity. https://doi.org/10.1016/S2666-7568(22)00038-1
14. Khwarahm; Ararat; HamadAmin; Najmaddin; **Rasul**; Qader, 2022, “Spatial distribution modeling of the wild boar (Sus scrofa) under current and future climate conditions in Iraq”, Biologia, 777(2). https://doi.org/10.1007/s11756-021-00936-1
15. Traore; Lee; **Rasul;** Balew, 2021, “Assessment of land use/land cover changes and their impacts on land surface temperature in Bangui (the capital of Central African Republic)”, Environmental Challenges, 4, https://doi.org/10.1016/j.envc.2021.100114
16. **Rasul**; Ningthoujam**,** 2021, “Snow cover and vegetation greenness with leaf water content control the global land surface temperature”, Environment, Development and Sustainability. https://doi.org/10.1007/s10668-021-01269-4
17. Mahmood; Khzr; Othman; **Rasul**; Ali; Ibrahim, 2021, "Optimal Site Selection for Landfill Using Boolean-Analytical Hierarchy Process (Case Study: Erbil Governorate – Iraq)", Environmental Earth Sciences. https://doi.org/10.1007/s12665-021-09501-0
18. Adamu; **Rasul**; Whanda; Headboy; Muhammed; Maiha, 2021, “Evaluating the accuracy of Spectral Indices from Sentinel-2 Data for Estimating Forest Biomass in Urban Areas of the Tropical Savanna”, Remote Sensing Applications: Society and Environment. https://doi.org/10.1016/j.rsase.2021.100484
19. **Rasul**; Ibrahim; Onojeghuo; Balzter, 2020, “A Trend Analysis of Leaf Area Index and Land Surface Temperature and Their Relationship from Global to Local Scale”, Land. https://doi.org/10.3390/land9100388
20. **Rasul**; Ibrahim; Hamid; Tansey, 2020, “A trend of increasing burned areas in Iraq from 2001 to 2019”, Environment, Development and Sustainability. https://doi.org/10.1007/s10668-020-00842-7
21. Ibrahim; Hamid; Darwesh; **Rasul,** 2020, “A GIS-based Boolean logic-analytical hierarchy process for solar power plant (case study: Erbil Governorate—Iraq)”, Environment, Development and Sustainability. https://doi.org/10.1007/s10668-020-00862-3
22. **Rasul**; Omar, 2020, "Land surface temperature anomalies detected for some strong earthquakes in 2018", ARO, 8 (2), 15-21. https://doi.org/10.14500/aro.10591
23. Hameed; Ibrahim; **Rasul,** 2020, “Effects of Land Cover Change on Surface Runoff Using GIS and Remote Sensing: a Case Study Duhok Sub-Basin", in: Environmental Remote Sensing and GIS in Iraq. https://doi.org/10.1007/978-3-030-21344-2_9
24. Tansey; **Rasul**; Ibrahim, 2020, “Scientific Quality Evaluation Report 2019 Burned Areas 300m V1”, Copernicus Global Land Operations. https://land.copernicus.eu/global/sites/cgls.vito.be/files/products/CGLOPS1_SQE2017-2018_BA300m-V1_I1.10.pdf
25. Ibrahim; **Rasul**; Hamid; Ali; Dewana, 2019, “Suitable Site Selection for Rainwater Harvesting and Storage Case Study Using Dohuk Governorate”, Water, 11(4), https://doi.org/10.3390/w11040864
26. **Rasul,** 2019, “An investigation into the location of the crashed aircraft through the use of free satellite images”, Journal of Photogrammetry Remote Sensing and Geoinformation Science, Volume 87, Issue 3, pp 119–122. http://dx.doi.org/10.1007/s41064-019-00074-z
27. **Rasul**; Dewana; Saed, 2019**,** “Multi-model tourist forecasting: a case study Kurdistan Region of Iraq”, Tourism and Travelling, 2(1). http://dx.doi.org/10.21511/tt.2(1).2019.04
28. Saed; Faqe; **Rasul**, 2019, “Water quality effects on Kidney Dieses in the slums area of Erbil City, Iraq”, International Journal of Geography and Geography Education, 40. https://doi.org/10.32003/iggei.523583
29. **Rasul**; Balzter; Ibrahim; Hameed; Wheeler; Adamu; Ibrahim; Najmaddin, 2018, “Applying Built-Up and Bare-Soil Indices from Landsat 8 to Cities in Dry Climates”, Land, 7(3), 81. https://doi.org/10.3390/land7030081
30. **Rasul**; Balzter; Smith; Remedios; Adamu; Sobrino; Srivanit; Weng, 2017, "A review on remote sensing of urban heat and cool islands", Land, 6(2), 38. https://doi.org/10.3390/land6020038
31. **Rasul**; Balzter; Smith, 2017, “Applying a normalized ratio scale technique to assess influences of urban expansion on land surface temperature of the semi-arid city of Erbil.”, International Journal of Remote Sensing, 38. http://dx.doi.org/10.1080/01431161.2017.1312030
32. **Rasul**; Balzter; Smith, 2016, “Diurnal and Seasonal Variation of Surface Urban Cool and Heat Islands in the Semi-Arid City of Erbil, Iraq”, Climate. https://doi.org/10.3390/cli4030042
33. **Rasul**; Balzter; Smith, 2015, “Spatial Variation of the Daytime Surface Urban Cool Island During the Dry Season in Erbil, Iraqi Kurdistan, from Landsat 8”, Urban Climate. http://dx.doi.org/10.1016/j.uclim.2015.09.001